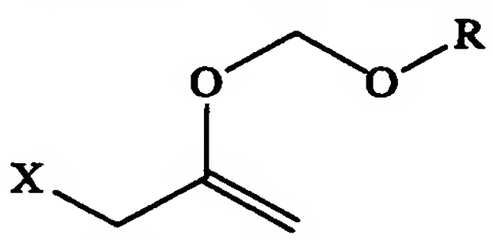
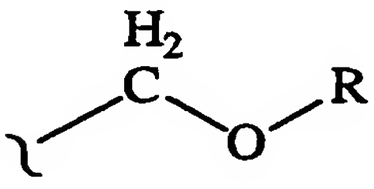
Claims

1. A method of protecting a hydroxyl group, which comprises reacting a hydroxyl group-containing compound with a compound represented by the formula (I):



(I)

wherein R is a phenyl group optionally having substituent(s), an alkyl group optionally having substituent(s) or a benzyl group optionally having substituent(s), and X is a halogen atom, in the presence of an acid catalyst to substitute the hydrogen atom of the hydroxyl group of the hydroxyl group-containing compound with a protecting group represented by the formula (II):



(II)

wherein R is as defined above.

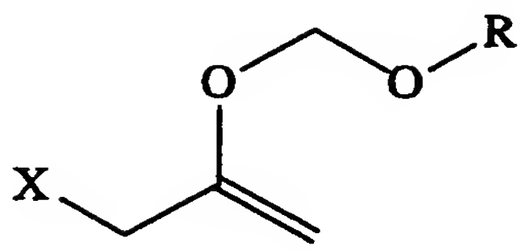
2. The method of claim 1, wherein R is a phenyl group optionally having substituent(s) or an alkyl group optionally having substituent(s).

3. The method of claim 2, wherein R is an alkyl group.

4. The method of any one of claims 1 to 3, wherein the acid catalyst is pyridinium p-toluenesulfonate or p-toluenesulfonic acid.

5. The method of claim 4, wherein the acid catalyst is pyridinium p-toluenesulfonate.

6. A hydroxyl group-protecting reagent which comprises a compound represented by the formula (I):



(I)

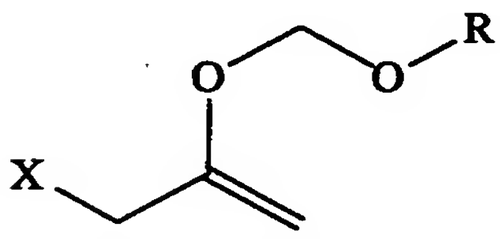
wherein R is a phenyl group optionally having substituent(s), an alkyl group optionally having substituent(s) or a benzyl group optionally having substituent(s), and X is a halogen atom.

7. The reagent of claim 6, wherein R is a phenyl group optionally having substituent(s) or an alkyl group optionally having substituent(s).

8. The reagent of claim 7, wherein R is an alkyl group.

9. The reagent of claim 8, wherein R is a methyl group.

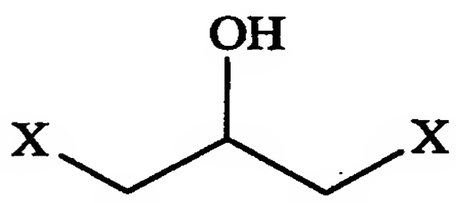
10. A method of producing a compound represented by the formula (I):



(I)

wherein R is an alkyl group optionally having substituent(s), a phenyl group optionally having substituent(s) or a benzyl group optionally having substituent(s), and X is a halogen atom, which comprises the following Step 1 and Step 2;

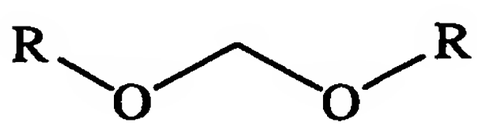
Step 1: reacting a compound represented by the formula (III):



(III)

wherein X is as defined above,

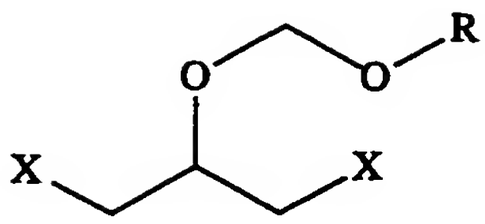
with a compound represented by the formula (IV):



(IV)

wherein R is as defined above,

to give a compound represented by the formula (V):



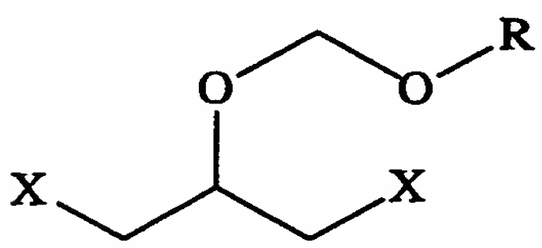
(V)

wherein each symbol is as defined above;

Step 2: reacting the obtained compound represented by the formula (V) in the presence of a base to give a compound represented by the formula (I).

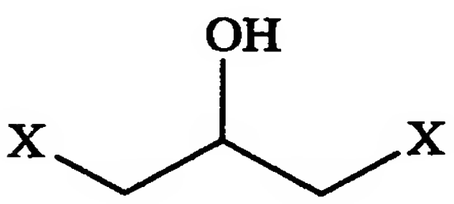
11. The method of claim 10, wherein R is a methyl group.

12. A method of producing a compound represented by the formula (V):



(V)

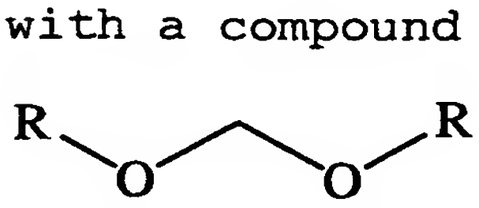
wherein R is an alkyl group optionally having substituent(s), a phenyl group optionally having substituent(s) or a benzyl group optionally having substituent(s), and X is a halogen atom, which comprises reacting a compound represented by the formula (III):



(III)

wherein X is as defined above,

with a compound represented by the formula (IV):



(IV)

wherein R is as defined above.

13. The method of claim 12, wherein R is a methyl group.